

deposited has been removed: it does not perceive that its labour has become objectless. When having completed its cell, having deposited its egg, and stored provisions for the larva, it returns with clay to cover the orifice, and finds that during its absence the cell has been destroyed. It will not appreciate the effect of this calamity, and will carefully affix the clay on to the place where the cell would be if undestroyed. It appears, as we shall see, that insects are not altogether devoid of reasoning powers. But, when acting under the obsession of directive instinct, they seem generally unable to make use of them.

All animals are dependent upon directive instinct for their development, growth, and the functioning of their internal organs. Invertebrate animals also rely upon it for the guidance of most of their external activities. The communal life of a bee-hive, or an ant's nest, is almost wholly regulated by it, in complications of constructive art, social organisation, and even civil government, the elaboration of which appears to us to be inconceivable without the use of reasoning intelligence. As we ascend the scale of vertebrates, directive instinct loses its efficiency, and resigns its paramount authority, until in man it is almost extinguished as a guiding force in behaviour. To hold tight and to suck are almost the only innate accomplishments of a newborn baby.

But it would be extraordinary were so vigorous

a force to vanish entirely, and we may believe that it survives in men. albeit with changed authority. We may, perhaps, trace to its influence our *aptitudes* for acquiring the accomplishments of our kind. We are born in the utmost inefficiency — unable to walk. to speak. or to realize our impressions : but the facility with which we learn these ideomotor processes seems to indicate that